

# **Phenomenology for architectural design exercises. The case study of ‘Integrated Seminar on Housing’.**

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Note: This text is theoretically based upon the previous article ‘Phenomenology for Introductory Architectural Analysis Courses: The pentagon methodological approach’ (authored by Fátima Pombo, Wouter Bervoets, Henk De Smet) published in *Design and Technology Education: an International Journal*, vol. 20, issue 2, 2015, 58-69.

## **Abstract**

Inspired by arguments about joining theory and practice both in design research and educational design programmes, this text aims to explore a phenomenological approach based upon five steps method in the framework of an exercise for engineering-architecture students from the University of Leuven in Belgium. Our case study is the “Integrated Seminar on Housing” taught in the first year of the programme studies. This text argues that a more explicit integration of phenomenological awareness with technical methodologies can contribute to the development of students’ skills to recognise and design architectural quality.

## **Phenomenological approach**

The phenomenological approach to architectural design points towards an understanding of architecture that is not confined to a design exercise but rather expresses a global concept of the relation between architecture and the human experience of space. In this paper it is expected to discuss the contribution of phenomenology to design a better architecture. However, it is important to highlight some features that are the core of phenomenological thinking, namely:

1. Phenomenology underlines the role of intuition, perception, quality, experience, enmeshing the questions of perception as questions of intention that are a pre-condition of reflecting about architecture. This is a sort of ambiguity that belongs to the phenomenological reflection about architecture which does not prevent phenomenology from developing a theoretical framework.
2. There is a ‘common denominator’ in a phenomenological discourse about architectural space: the embodied experience of it and its synesthetic appropriation. The perception of space and the fruition of atmospheres is a complex of multisensory experience.
3. The concept of atmosphere is central to the discourse on architecture and phenomenology. Atmosphere is not an objective parameter and neither a stylistic element, but instead the result of different parameters intertwining with the embodied self. Atmosphere interpreted as ‘a mental ‘thing’, an experiential property or characteristic that is suspended between the object and the subject’ (Pallasmaa in Borch, 2014:20-21) is a target for critical notes that stress its lack of objective consistency and demand conceptual work to prevent the abuse and manipulation of its psychological effects namely in a social and political context. (Borch, 2014:11).

Although quite different in their thematic emphases and in the value of phenomenology as a way, method, or approach by which architectural problems can be identified and clarified, some authors stand out, such as Steen Eiler Rasmussen, Christian Norberg-Schulz, Thomas Thiss-Evensen, Kenneth Frampton, Peter Zumthor, Juhani Pallasmaa, Steven Holl, Alberto-Pérez Gómez among others. Otero-Pailos offers a chronological account of the term ‘architectural phenomenology’ since it was more widely used in the post-war period as ‘the study of architecture as it presents itself to consciousness in terms of so-called archetypal human experiences’ (in Crysler et al., 2012:136). A more extensive and detailed discussion about the endeavours of architectural phenomenology and the intellectual tensions between postmodernists and poststructuralists was achieved by Otero-Pailos in his book ‘Architecture’s Historical Turn. Phenomenology and the Rise of the Postmodern’, published in 2010.

The premise and focus of this text is to discuss the importance of bringing an explicit phenomenological awareness articulated with the programmatic and technical methodologies into architectural education. The educational programme of Engineering-architecture in the department of Architecture at the University of Leuven is closer to a tradition of the schools that educate future practitioners stressing more technical studies than artistic ones.

The book *Bronnengids Architectuur Onderwijs Vlaanderen* (2012) [*Sources for Architectural Education in Flanders*] is an important source that documents that statement. However, as a consequence of fruitful discussions about joining theory and practice both in design research and educational design programmes inspired by congresses, by published works and by the challenges of the profession in the 21<sup>st</sup> century conditions were created for the experimental case study reviewed in this paper.

The book *Architecture School. Three Centuries of Educating Architects in North America* (Ockman, 2012) contributes to the understanding of ‘the turn of the education’ – which is the title given to the introduction – facing up to the transformations of our time and the pressures put on the architect’s training namely regarding the ‘studio culture’ (Ockman, 2012:10-33).

In the chapter ‘1990-2012 The future that is now’ Stan Allen reviews the concept of the syncretic nature of the profession and the role of the architect in society in very contemporary contexts as the new technologies, globalisation and the tensions between the global and the local, networking, activism and others. In respect to the design culture the author stresses:

‘Students today look at the same books and journals, work with the same software, and listen to the same architects who travel the international lecture circuit. What is required to comprehend globalism today is not tired generalization, but close study of specific places, cities, and cultures’. (Allen cited in Ockman, 2012:229).

Particularly in the part two of *Architecture School. Three Centuries of Educating Architects in North America* architectural education and design pedagogies are addressed by topics which relevance go behind the American context, contributing to a more global questioning about the architect’s training and practice in a near future. The book *Educating Architects. How tomorrow’s practitioners will learn*

*today* edited by Neil Spiller and Nic Clear (November 2014) focusses on pedagogical philosophies and practical examples for the architectural education in the twenty-first century. In the introduction with the significant title ‘Paradoxical simultaneities: Architectural education at the edge of the 21st century’, Neil Spiller gives account of the huge transformations in recent years namely the ‘great tsunami of technology’ and ‘the emergence of digital fabrication techniques’ (2014: 11) and how much this and other eclectic simultaneities oblige to a discussion about the role of architectural education nowadays. The reading of the essays confronts the reader with a wide range of methods which have the goal of contributing to the preparation of future architects for some of the challenges they will face in their profession. A common axe in these essays to be captured by the reader is the requirement to provide and stimulate the student with a wide range of skills, knowledge and interdisciplinary learning of architecture. In the essay of Nic Clear that requirement converges with his belief that ‘a great school of architecture develops students who go on to become whatever they want to be’ (2014: 101).

In a more radical phrasing, Nigel Coates states that:

‘rather than a merely practice-based approach, a school needs to make room for architecture as a culture, and should allow its students to soar in ways they will never match in the future’ (2014: 164).

The plea for additional attention to architectural phenomenology is not evident given that the education system in many European countries is confronted with budget cuts, increasing numbers of students, declining numbers of educators and consequential cuts in time and resources for personal guidance of students. It is to observe that nowadays the profession of architect requires a more extensive attention than before to the legal, financial and management aspects of the construction industry that therefore these are also integrated in the architectural programs. Because of these trends, additional attention to less tangible aspects of architecture such as generating a ‘phenomenological awareness’ is not obvious in an already overloaded curriculum. Moreover, architectural phenomenology is often considered by the architectural staff members to be already present in architectural education, usually in an implicit manner and spread over some courses. However, it is the aim of this text to point out that a clearer and more active phenomenological approach can contribute to a more evident awareness by students about recognising and designing architectural quality. Therefore it has an important place within architectural education in design studio classes.

### **The case study of ‘Integrated Seminar on Housing’**

At the University of Leuven the annual “Integrated Seminar on Housing” focuses on the analysis of residential architecture in Belgium. This exercise is seen as important in the educative training drawing the attention of the students to the statement that designing a house is a challenging task for an architect. There is not a complete, definitive answer to the question ‘what is the ideal house to live in?’ A house

is essentially connected with each person as an individual and a social member; is confrontation with experience of space and time; is a partner in life. A house is definitely an architectural object in which every element has its own expression and makes the house as object coherent.

This paper reports the phenomenology's potential when incorporated into the body of architectural teaching mirroring a five-steps method (the pentagon methodological approach [Pombo, Bervoets, De Smet, 2015]) applied in the "Integrated Seminar on Housing". The method has been explored during the past 3 academic years. The seminar is organized in the very first semester of the Bachelor programme in Architectural Engineering, and is complementary to other introductory courses such as 'Architectural Theory, Part 1', in which houses are regarded as a key issue in architecture; and 'Construction of Buildings, Part 1', focusing on traditional engineering. Both courses support the seminar conveying to the students the necessary knowledge about engineering and architecture theory. The seminar starts from a selection – yearly updated by screening architecture publications and websites, and by recommendations from practicing architects – of around 40 built examples of contemporary residential architecture in Belgium. In small groups of 3 or 4, students have to visit, photograph and analyse one of the 40 dwellings. A visit and experience in real life of the building are fundamental elements of the assignment. The selected dwellings vary from the first built projects of promising new architecture offices to recent works by established architects. Dwelling typologies vary from apartments and lofts to terraced, semi-detached and detached houses in urban, suburban and rural settings; and from renovation to new construction projects. At the end of the semester, the seminar results are presented through 15 minute slideshows, followed by debate about the architectural quality of the analysed dwellings among students, their peers in the auditorium and the jury members.

## **Objectives and Methodology**

The overall objective of the seminar is to teach first year students, generally with no prior knowledge about architecture, to look in an 'architectural way' at dwellings and the built environment. In addition, they are encouraged to question their own dwelling preferences, prejudices and experiences. Through sober but visually attractive presentations, students have to develop an in-depth understanding of their case study dwelling, and offer a personal opinion on architectural quality. The presentation is expected to allow a discourse integrating the architectural drawing conventions and architectural constraints such as location and program, with the concept, spatial organization of the dwelling, and the subjective experience gathered during the house visit. By acknowledging design decisions regarding the visited dwellings, students are expected to build a well-based criticism about the dwelling's architecture they encountered.

To achieve the objectives a primary methodological approach is further combined with a phenomenological approach. By primary methodological approach is considered the collection of building plans and all other existing material on the dwelling available from the architect, the internet or the library. This material also helps students to prepare the home visit. The actual visit to the dwelling

takes around one hour, a rather short time to take good quality pictures, canvas subjective experiences, and critically analyse the dwelling. Therefore, students are asked to carefully study the collected material prior to their visit, in order to identify the elements that demand special attention and to prepare questions to the homeowner.

The primary methodological tool consists of producing accurate graphic material, to be presented in a structured, easy to follow presentation. Firstly, students have to (re)produce precise building plans of the dwelling – implantation, floor levels and sections – with CAD software. All architectural drawing conventions have to be followed, but the level of detail is limited to that of ‘publication plans’. In case of a house renovation or expansion, through the contrasting colouring of the demolished and the added elements, the original and actual situation are analysed and visualised. Secondly, to analyse and visualize the internal circulation and spatial organization of the dwelling, students have to colour the plans according to the different rooms use and purpose. Thirdly, combining their photographic material with small inset plans, students create an easy to follow visual tour through the house and include it in their final presentation. The combination of these 3 subsections helps students to understand the plan organization and the housing system functioning. Their presentation in a descriptive manner allows the audience an overall and neutral introduction to the house.

For the final analysis, students have to develop an architectural critique of their case study dwelling. To support, develop and enrich that architectural critique of their case study dwelling, students are introduced to the phenomenological approach to the exercise structured in 5 phases: awaking phase; self questioning on dwelling, defining parameters, interpreting themes, discussing results. To assist in the production of the requested graphic material and its merging into a coherent presentation, students are offered specific courses on architectural drawing conventions, 2D and 3D CAD drawing, architectural photography and presentation skills as part of the seminar. Additionally, two interim consultation meetings are organized, with the teaching team offering suggestions to adjust and supplement the draft version of the final presentations.

### **The phenomenological approach – 5 phases**

Within the framework of studies, discussions, debates and goals about architectural education the current review of the application of a phenomenological approach in an architectural studio is a very modest contribution. The method is based on five steps which arose from the authors’ attempt to organise insights about phenomenology and architecture in such a way as to inspire and offer new qualitative perspectives to the students while dealing with their exercise. The five phases represent five moments beyond the technical tasks the students were asked to perform. The students had to recall experiences and information from sources not immediately connected with architecture, but with impact on the interaction with the designed space, namely a house. The integration of a phenomenological approach in the first year of the studies programme had a purpose. The fresh university students were enmeshed

with insights about architecture that point to architectural details, to the aesthetical appropriation and the sensorial features of a particular space. The students were speaking and experiencing architecture with a language that cannot be measured or achieved through objective or quantitative calculations. In the second semester the same students have to design a family house in a design studio assignment. The five step methodology aims to contribute through the experience of the course 'Integrated Seminar on Housing' to the quality of this exercise. The following five phases, here summarized, intend to clarify the 'plot' of each step and how it is presented to the students.

Phase 1 – awakening phase: In this early moment it is important to present the students specific terminology concerning phenomenology and architecture. They are introduced to the linguistic mind they are expected to master during their exercise, namely that each building provides atmospheric qualities and interacts with the individual in a total way as body, mind, and spirit. To illustrate that building's sensory properties contribute to creating the atmospheric quality of an architectonic space some writings and practical examples from well-known architects and theorists are discussed in class. Most of the students will hear the term 'phenomenology' for the first time during this assignment, and the purpose of the exercise is not to teach phenomenology as a philosophical movement or discuss controversies of architectural phenomenology in the history of architecture. The exercise is intended to introduce the students to concepts like atmospheric quality and the impact of this quality on the individuals that experience the architectonic space.

Phase 2 – Self questioning on dwelling: At this stage erudition or knowledge about theory of architecture must be put aside. Students are asked to face the subject of dwelling on their own referring their experience about dwelling, imagining and describing the house where they would like to live, their memories, feelings, perceptions, imagery about homes they inhabited, such as their family home, friends' home or grandparents' home, bringing up to light the features and the character of such dwellings. Therefore, students are encouraged to look back, namely into their childhood, and to evoke memories, feelings, perceptions, imagery about homes they inhabited, such as their family home, friends' homes or grandparents' homes, bringing to light the features and the character of such dwellings. Students are also expected to classify the relations between them and the rooms' atmospheres, such as affability, hospitality, monumentality, cosiness, privacy, intimacy, silence, noise, warmth, coldness or comfort, connecting these to elements intrinsic to construction: materials, size, texture, temperature, proportion, light or shadow. Students may also link perceptions such as scent or touch, beyond the evidence of visual or acoustic reality. Students' reflexions triggered by self questioning on dwelling contribute to discussion of dwelling as a phenomenon that occurs in time that is rooted in a locality, an environment, a landscape, stressing the multiple meanings of feeling or not feeling at home. Hence designing, building and dwelling become accomplices at this point. Students have indeed different memories about their dwellings and can describe them through feelings and sensations linked with smells, colours, sizes, textures, materials.

Phase 3 – Defining parameters: The intertwining of detail and whole entity unfolds in the process of architectural design. Each architectonic element (parameter) works together to create a space in which materiality and form invites the individual to perceive it, react to it, to relate to it through an embodied way (seeing, feeling, smelling, hearing, touching) and charging it with meaning. A list of parameters is presented to students as light, shadow, color, material, texture, rhythm, structure, proportion, size, volume, shape, inside, outside, in-between, landscape. Besides functional and technical requirements, students are faced with the architectural quality of the project they are intended to interpret. Therefore, in this phase the parameters each student is interested in emphasizing in his/her exercise are clarified in order to describe the perceptive quality of the building, character of the place, or in other words, its atmosphere.

At that point it is clearer (1) that the design process depends on the interplay of rational and objective criteria with intentions and feelings about the space the architect wants to design and (2) that parameters contribute to create certain atmospheres, aesthetical opportunities, potential living experiences.

Phase 4 – Interpreting themes: After combining parameters such as light/shadow/material, texture/structure/rhythm, colour/texture/light the students organize the themes they want to explore depending on (or motivated by) the previously combined parameters and the particular characteristics of their case study dwelling. Possible themes are for example: the relationship between the spatial organisation and the privacy in the dwelling, the impact of an open plan on the indoor atmosphere, eventual conflicts between the materiality and spatiality of the dwelling, introverted or extroverted characteristics of the dwelling or particular rooms, openness (in a corner, the middle of a wall, in the ceiling) and perception of sunlight, etc. Subsequently, they will describe the atmosphere they felt inside the dwelling. Finally, the inter-subjectivity of the experiences will be discussed to contribute to the enrichment of the concept of atmosphere, namely as individual or interpersonal resonance.

At this interpretative phase, students identify the effects of the chosen parameters on the quality and character of the space they analysed in both a subjective and intersubjective context. Students discuss what the house offers to people that live there and how the house refers to the outside environment (the street, the neighbours, the landscape...). At this stage it is expected that students become aware of the relevance of carefully choosing parameters in the design process and final architectural project quality.

The few examples presented below are a very pale reference about the intertwining of the primary methodological tool (see objectives and methodology) and the phenomenological approach. Due to papers' length constraints, only the example 1 depicts graphic material related with the primary methodological approach, namely a picture of the house (Figure 1), implantation plan (Figure 1.1) axonometry (Figure 1.2), floor plan (Figure 1.3). Figures 1.4 and 1.5 showcase a combination of parameters to organize themes inspired by the phenomenological approach.



Figure 1. Weekend House by Gafpa Architects.

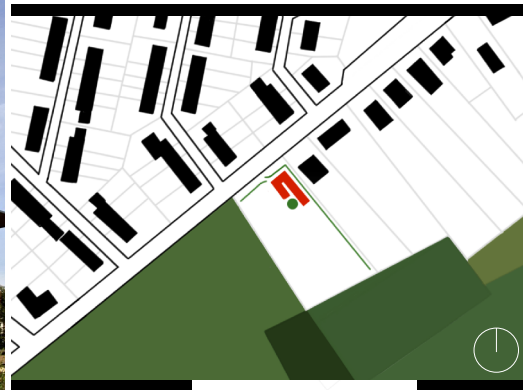


Figure 1.1. Implantation plan

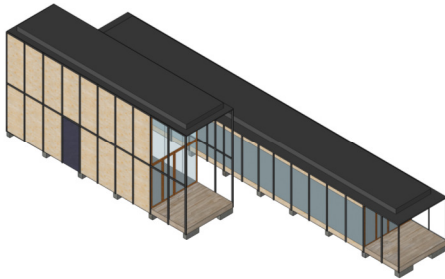


Figure 1.2 Axionometry

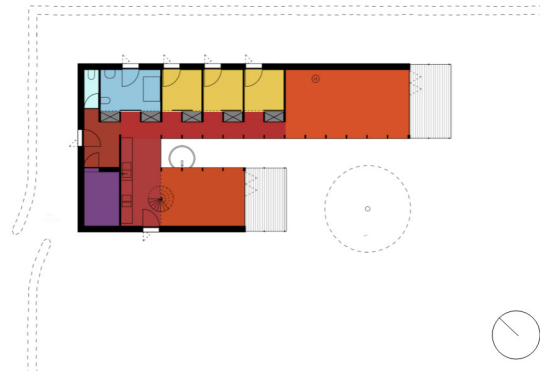


Figure 1.3 Floor plan



Figure 1.4 living room detail

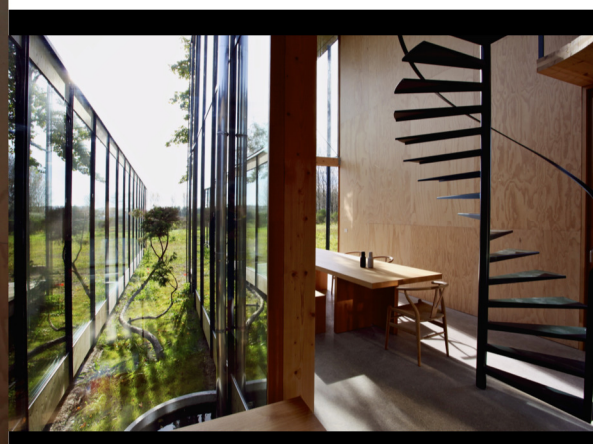


Figure 1.5 living room detail

Figure 1.4 and 1.5 depict the combination of parameters light/shadow/ landscape/material to support the theme ‘perceptions between inside and outside with graphic effect of stairs and glass walls structure.’



Example 2 depict the combination of parameters material/inside/outside/shape to support the theme ‘framing exterior’s perception through an opening in the wall’.

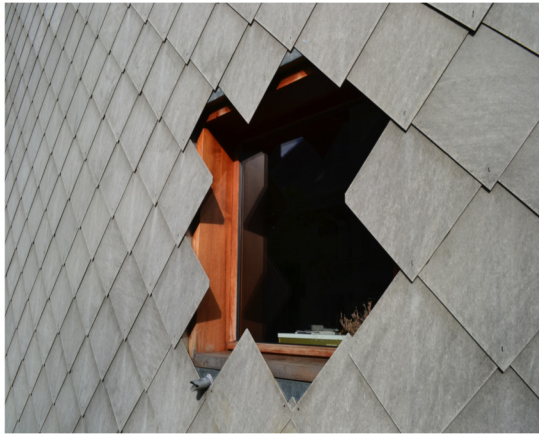


Figure 2. 1 Single family house by DVVT (De Vylder Vinck Taillieu Architects). Detail in the façade’s wall.

Figure 2.1 view from inside through the façade’s opening.

Example 3 depict the combination of parameters rhythm/material/texture to support the theme ‘tactile and visual experience of space’



Figure 3. House in a row, Bulk Architects. View from the bathroom into two rooms

Figure 3.1 Street façade

Figure 3.2 Street façade with garage gate

Example 4 depict the combination of parameters structure/material/proportion/light to support the theme ‘impact of the space based upon volume and materiality’.



Figure 1 Single family house, Ono Architects. View of the living room



Figure 1.1 View of the bathroom

Phase 5 – Discussing results: In the final phase, students have to present the results of their analysis to their fellow students and jury members building up a critical reasoning from inside the architectural project, the house they have to deal with. To visualize their analysis, students use graphic material produced with different representation techniques: CAD plans and sections, 3D modelling and photography. For the phenomenological part of the seminar, the photographs made by the students during the home visits are the main visual expression tool. Because of the rather limited visual representation skills of the first year students, photographs are the easiest and most direct way to represent the atmosphere of the visited dwelling. The few examples of pictures presented above show how students combined different parameters, organised themes and grasped the atmospheric qualities of the houses they visited. The presentation of the examples is a very tiny sample of the type of visual material that was achieved by the students. The discursive side of the presentation is not possible to reproduce in this text.

During their final presentations, students have to explain and discuss their responses to some provocative questions regarding the practice of being a designer such as: Is it a good project? Why or why not? Which solutions and inventions of the designer do you admire? What would you have done differently as a designer? Did this house analysis teach you something for your own design practice?

Finally each presentation is followed by a short debate about the architectural and atmospheric qualities of the analysed dwellings among the students, their peers in the auditorium and the jury members. The opinions that come forward in these debates make clear to the students that the perception of architecture and its communication asks for their self-capacity of grasping a specific space besides a technical language.

### **Reflections about the pentagon methodological approach**

Within the many approaches relying upon different theoretical frameworks like among others the gestalt psychology, the sociological, linguistic and post colonialist theories, structuralism, deconstructivism, phenomenology... that have been applied to analyses and discussions of architecture, the aspiration of this paper is to underline the positive influence of phenomenology in an architectural exercise. The

phenomenological part of the 'Integrated Seminar on Housing' aims to generate more explicit phenomenological awareness among the students. The initial reaction of the students to this five-step methodological approach is one of strangeness. Being first year students they are not familiar with the very specific phenomenological discourse. In effect, students engage themselves through the five-steps methodology with different backgrounds, motivation and comprehension.

In the 'Integrated Seminar on Housing', through the 'compact' 5-step approach students become quickly aware of knowledge that is anchored in a perceptive level and hence that architectonic decisions in that arena influence the projects' character. The exercise is intended to introduce the students to concepts like atmospheric quality and the impact of this quality in the individuals that experience the architectonic space. Therefore it claims the built space as a balanced design between pragmatism, local culture, sensorial appropriation of the dwelt space and the individual's identification. The above mentioned exercise is a golden opportunity to discuss such balance, since it focuses on the dwelling i.e. a place where the appropriation of an existing space means far more than practical, functional issues. It is difficult to estimate, let alone to measure, the effect of the integrated seminar on the personal development of the students and on their later professional design practice. A positive effect can for example clearly be noticed during the design exercise for a single family house in the second semester. Besides the general knowledge gained on residential architecture and presentation skills, the increased sensitivity to the atmospheric qualities of buildings also contributes to the students' design capabilities and improved outcomes. The seminar not only offers the students an overview of 40 different houses for inspiration and self-questioning on dwelling (phase 1 and phase 2), the analytical work also gives them insight into how architectural elements contribute to promote the quality of a space to dwell (phase 3 and phase 4) and the presentation and debate about the exercise accomplished challenge the critical reasoning skills (phase 5). Finally the exercise also adds arguments to think further about the syncretic nature of the architectural education.

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